

IN THE CLAIMS:

1-51. (Canceled)

52. (Currently amended) An isolated nucleic acid molecule comprising a nucleotide sequence which encodes a protein, wherein said protein comprises a SOCS box which comprises ~~an~~ the amino acid sequence as set forth in SEQ ID NO: 52 ~~or~~ SEQ ID NO: 55, ~~or an amino acid sequence having at least about 70% similarity to SEQ ID NO: 52 or SEQ ID NO: 55, and~~ wherein said protein ~~suppresses cytokine mediated signaling~~ inhibits Interleukin-6 mediated signal transduction.

53. (Currently amended) ~~The~~ An isolated nucleic acid molecule comprising a nucleotide sequence which encodes a protein of claim 52, wherein said protein is further ~~characterized as comprising an~~ comprises the amino acid sequence as set forth in ~~any one of~~ SEQ ID NO: 4, SEQ ID NO: 10 ~~or~~ SEQ ID NO: 12, ~~or an amino acid sequence having at least about 50% similarity to any one of SEQ ID NO: 4, SEQ ID NO: 10 or SEQ ID NO: 12.~~

54. (Currently amended) An isolated nucleic acid molecule comprising ~~a~~ the nucleotide sequence as set forth in ~~any one of~~ SEQ ID NO: 3, SEQ ID NO: 9 ~~or~~ SEQ ID NO: 11, ~~or a nucleotide sequence which hybridizes under low stringency conditions to any one of~~ SEQ ID NO: 3, SEQ ID NO: 9 ~~or~~ SEQ ID NO: 11, ~~wherein said low stringency conditions comprise at least about 1% v/v to at least about 15% v/v formamide at least about 1M to about 2M salt for hybridization at 42°C, and at least about 1M to about 2M salt for washing, and wherein said nucleotide sequence encodes a protein which suppresses cytokine mediated signaling.~~

55-62. (Canceled)

63. (Currently amended) An isolated protein consisting of the ~~an~~ amino acid sequence as set forth in ~~any one of~~ SEQ ID NO: 4, SEQ ID NO: 10 ~~or~~ SEQ ID NO: 12, ~~or an amino acid sequence having at least about 50% similarity to any one of SEQ ID NO: 4, SEQ ID NO: 10 or SEQ ID NO: 12, and wherein said protein suppresses cytokine mediated signaling.~~

64-67. (Canceled)

68. (Currently amended) An isolated nucleic acid molecule consisting of a SOCS protein coding nucleotide sequence which encodes a protein, wherein said SOCS protein comprises a SOCS box which comprises an amino acid sequence as set forth in SEQ ID NO: 52 or SEQ ID NO: 55, or an amino acid sequence having at least about 70% similarity to SEQ ID NO: 52 or SEQ ID NO: 55, and wherein said protein ~~suppresses cytokine-mediated signaling~~ inhibits Interleukin-6 mediated signal transduction.

69. (Previously presented) The isolated nucleic acid molecule of claim 68, wherein said protein is further characterized as comprising an amino acid sequence as set forth in any one of SEQ ID NO: 4, SEQ ID NO: 10 or SEQ ID NO: 12, or an amino acid sequence having at least about 50% similarity to any one of SEQ ID NO: 4, SEQ ID NO: 10 or SEQ ID NO: 12.

70. (Currently amended) An isolated nucleic acid molecule consisting of a the nucleotide sequence as set forth in any one of SEQ ID NO: 3, SEQ ID NO: 9 or SEQ ID NO: 11, or a nucleotide sequence which hybridizes under low stringency conditions to any one of SEQ ID NO: 3, SEQ ID NO: 9 or SEQ ID NO: 11, wherein said low stringency conditions comprise at least about 1% v/v to at least about 15% v/v formamide at least about 1M to about 2M salt for hybridization at 42°C, and at least about 1M to about 2M salt for washing, and wherein said nucleotide sequence encodes a protein which suppresses cytokine-mediated signaling.

71. (New) An isolated nucleic acid molecule comprising a nucleotide sequence which encodes a protein, wherein said protein comprises the amino acid sequence as set forth in SEQ ID NO: 4.

72. (New) An isolated nucleic acid molecule comprising the nucleotide sequence as set forth in SEQ ID NO: 9.

73. (New) An isolated nucleic acid molecule consisting of the nucleotide sequence as set forth in SEQ ID NO: 9.

74. (New) An isolated nucleic acid molecule consisting of the nucleotide sequence as set forth in SEQ ID NO: 11.

75. (New) An expression vector comprising the nucleic acid molecule of any one of claims 52-54 or 68-74.

76. (New) A host cell comprising the expression vector of claim 74.

77. (New) A method of producing a SOCS protein, said method comprising culturing the host cell of claim 76 under conditions allowing the expression of said SOCS protein, and isolating said SOCS protein.

78. (New) An isolated protein consisting of the amino acid sequence as set forth in SEQ ID NO: 10.

79. (New) An isolated protein consisting of the amino acid sequence as set forth in SEQ ID NO: 12.

80. (New) The isolated protein of claim 63, 78 or 79, wherein said protein is derived from mouse, rat or human.